

REPORTING AND TRANSCRIBING
MACHINES,

WITH SPECIAL REFERENCE TO

THE TYPE-WRITER.

BY

JAMES G. PETRIE,

PROFESSIONAL SHORTHAND-WRITER,
FELLOW AND HON. TREASURER OF THE SHORTHAND SOCIETY.

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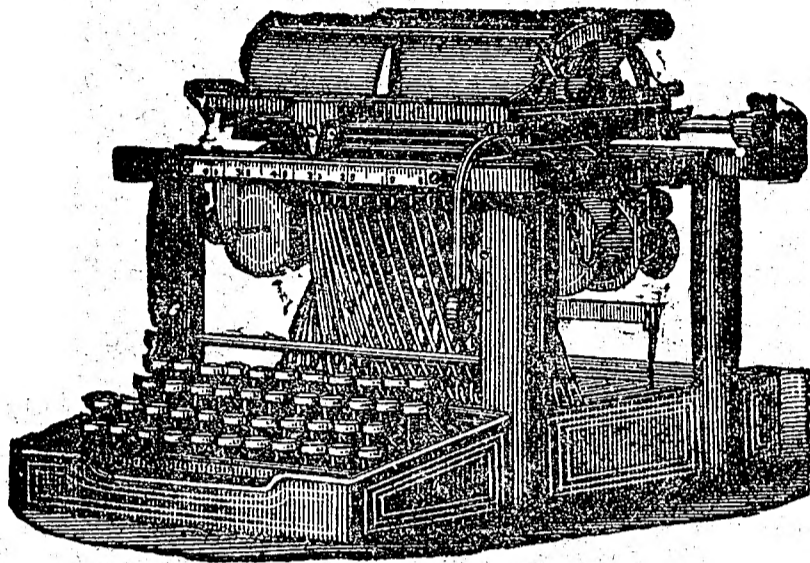
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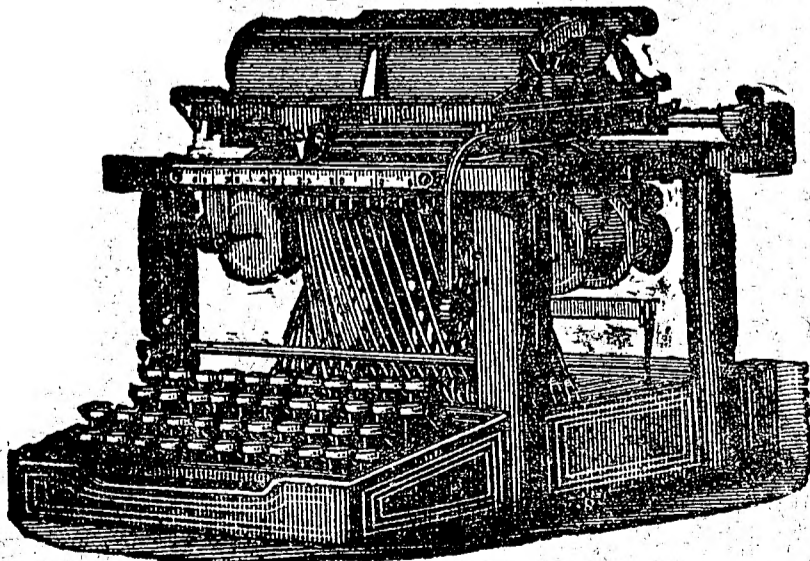
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REPORTING AND TRANSCRIBING MACHINES,

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THE TYPE-WRITER.

*A Paper read before the Shorthand Society, at the City Club, Ludgate
Circus, London, on 2nd May, 1882,*

BY

JAMES G. PETRIE,

PROFESSIONAL SHORTHAND WRITER, FELLOW AND HON. TREASURER
OF THE SHORTHAND SOCIETY.

(CORNELIUS WALFORD, ESQ., F.S.S., F.I.A., *President, in the Chair.*)



OUR worthy President, in the excellent address with which he opened the first Session of this Society, referred to the question of mechanical aids to the Shorthand-Writer, adding that when these came to record speeches with merciless exactitude the present system of reporting would be more appreciated than it is at present, and that every Shorthand-Writer would be looked upon as a hero. Since then it has occurred to me, as I have all along taken an interest in this question of mechanical aid, that a Paper on the subject of the several machines and their capabilities cannot fail to be interesting to the class that their operation would mainly affect. There are two sides to every question, and I think a fair inquiry, with the discussion that may follow this Paper, cannot fail to clear the air a little, and while it may tend to show what the machines are capable of doing, will, at the same time, explode many of the extremely favourable and fulsome reports which have been made of some of the machines by writers in the Press, and especially in the French section of it.

That the Press generally at the first have taken a rather too favourable view of some of the machines there can hardly be a doubt, and I am afraid that people are only too ready either to entirely condemn a new invention, or, as in the case of some of these machines, to attribute to them capabilities far beyond their powers. I need only refer you to the extremely fulsome statements which were at one time written about the phonograph, and what it was said to be able to accomplish, to show how fallacious and misleading are many of the accounts of new inventions. The phonograph, you will no doubt remember, was stated to be a wonderful instrument capable of recording on a strip of tinfoil, and reproducing at convenience, not only the sounds of the human voice, but, by some simple adaptation which it was affirmed would easily be made, it was to follow the most rapid speaker, who had only to address himself to this wonderful machine to have his impassioned phrases recorded and reproduced in the very tone of voice in which they were spoken. But what did we find to be the grim reality? Why that the phonograph was

merely an extremely clever toy, reproducing on a limited piece of tinfoil a few sentences of, at most, five minutes' duration, and that in tones far from clear or distinct.

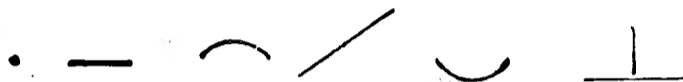
And it has been the same with many of the other so-called labour-saving machines; they have at first been made the subject of all sorts of sensational accounts, and have been credited with doing what they are quite unsuited to accomplish. At the same time it is of the utmost importance that those who earn their bread by the exercise of the Stenographic art should be well posted up in regard to the capabilities of these machines, which have threatened in some cases to interfere with them. Strange as it may seem, I have found that the last people who know anything about their construction and capabilities are the Shorthand-Writers themselves; and I therefore thought it might be interesting to prepare this Paper, to endeavour to show what machinery can and cannot do; whether it can be used by the Stenographer as a useful aid in the course of his arduous labours, or whether it is merely a hindrance and a nuisance, and, like many other new inventions, only to be tried for a season, and then to be set aside in favour of the old pen or pencil and note-book.

The first machine for reporting that I will refer to is that patented in this country by a Mr. Holten, but which was invented by Messrs. Hansen and Jürgensen, of Copenhagen. This machine was exhibited at the last Paris Exhibition, and was seen there by several of my friends. One gentleman, a member of this Society, had the machine lent him for trial, but he informs me that he did not take to it kindly at all, and soon after returned it to the agent. The machine consists of a writing-ball or half-sphere, on which are arranged a series of pistons having upon each a letter of the alphabet or some other sign as the case may be. These pistons do not all strike to the centre, but are so arranged that their bottom points stand in one or more straight lines, so that the points do not come transversely opposite the points of another line. These pistons terminate in a blunt point or letter which impinges against a band of white paper and makes an impression in the same through the medium of a carbonised ribbon. The white paper band is provided with as many division lines as there are pistons, each of which makes its impression on its own division, and the letters are in vertical lines instead of running from left to right. In order, however, to get a continuous style of printing, such as the type-printing telegraph turns out, a most complicated arrangement has been devised.

The white paper band is prepared so as to conduct electricity, and is propelled by clockwork from a drum in a direction perpendicular to the row of pistons. A series of stationary metal points, the same in number as the pistons, is arranged in a diagonal direction under the paper band, which feel the touch of the indents in the paper. These points are connected with an electro-magnet, the keeper or armature of which carries at its end a type corresponding to the letter on the knob of the piston. When one of the keepers is attracted by its electro-magnet the types on the end of the keeper make an impression on the edge of the white paper band through the intervention of the carbonised band, which is moved by the clockwork in a direction perpendicular to that of the white paper band. The latter band is connected to one pole of an electric battery, and the points and electro-magnets to the other. The impressions in the paper band are thus brought into contact with the fixed metal points under the paper as it is moved along, the corresponding electro-magnets are thereby brought into action, and the types on their keepers impressed

on the white paper band through the medium of the other coloured band. Now I think you will agree with me that this is a most complicated arrangement, bringing into play as it does the action of the fingers, clockwork, and electricity at the same time.

The next machine I will refer to is the Michela machine invented by Antoine Michela, Jean Michela, and T. Gabriel de Petro, of Turin. This machine in appearance is somewhat like a small piano, having twenty white and black keys arranged in the same manner as those of the piano keyboard. These are divided into two sections, one for the right and the other for the left hand, each finger manipulating two keys. Between the two sections is a cylinder from which is unrolled a strip of paper on which the Stenographic characters are imprinted. Upon this band, which unrolls itself automatically, are printed in relief and colour six conventional signs, which produce by their combination a representation of all the sounds possible in the human language. These signs are as follows:—



and they are utilised so as to represent the several signs which the vocal organs are capable of pronouncing. The six signs occupy the first six keys of the left keyboard, and in their reverse order occupy the last six of the other keyboard, the first four signs occupying the remaining four keys of each board. There are thus produced four series of signs which are used in the following manner:—The first series represent the initial consonants, or initial phonetic consonantal elements of syllables; the second series, the second consonants; the third series, the vowels; and the fourth series, the final consonants, or consonantal elements of syllables. Each of these elements is estimated to be of the numerical value of 1, 2, 3, 6, 9, or 18, or of a number formed by the combination of two or more of these numbers. Thus the word “plan” can be struck simultaneously, and will be represented as follows:—



The apparatus is divided into two parts, one performing the impression of the letters, and the other the automatic feeding of the paper band.

To make a syllable it is necessary to strike a chord with two, three, or four fingers, and in following a speaker to strike a series of chords requiring difficult transpositions. Signor Michela, however, claims to have overcome what would seem to us to be almost insurmountable difficulties, and some of his operators are said to have gained an average rate of four syllables per second in any known language. Of course, like all mechanical aids, the machine makes the characters correctly and regularly, and, provided they are accurately marked on the paper, the reading of them can be effected without difficulty. So much so is this the case that the translation of the characters is stated to be mastered in about a fortnight. The most important public trial of this machine was that before the President of the French Chamber of Deputies, M. Gambetta, at the Palais Bourbon, when, if the French newspapers are to be believed, an Italian lady, named Miss Guillio, worked the apparatus, and produced some extraordinary results. This lady, although not well versed in the French language, took down a rapidly-read page of the official reports of the Chamber, the President complicating the operation by throwing in an occasional interruption in the Latin tongue. The

newspaper account of the *séance* states that not only was the document faithfully reproduced, but also the interruptions and gesticulations. The accounts at the time were of the most glowing description, predicting that the machine would be certain to be adopted by Parliamentary bodies as well as in the law courts, and by private business houses. How is it, then, that this machine which made its advent with so great a flourish of trumpets, and which avowedly is an exceedingly clever and ingenious piece of mechanism, has not borne out the good things which have been said of it? I am indebted to the *Bulletin de l'Association des Sténographes de Paris* for some interesting particulars which go far to explain this.

So impressed were the French by it that a commission was actually appointed to inquire into the possibility of utilising it in reporting the deliberations of the French Parliament, the result being that the committee reported unfavourably upon it. Signor Michela was invited to attend a sitting of the French Chamber of Deputies, so that the capabilities of the instrument might be fairly tested in reporting the proceedings of a single sitting, and its performance compared with that of the regular corps of Stenographers. Signor Michela, I understand, declined this trial of strength on the plea that he was not then provided with sufficiently-skilled operators. It has been, moreover, rumoured that the French papers were influenced in some way or another in publishing the very favourable reports which they inserted of the performances of this machine, which, far from accomplishing what had been claimed for it, has in the end turned out to be a comparative failure.

In addition to this, the Conseil Municipal de Paris, whose proceedings seem hitherto to have been reported in a somewhat condensed form, have lately been smitten with a desire to have their most sapient utterances recorded in full for the edification of themselves and the public, and they also appointed a commission to inquire into the advisability of reorganising their reporting corps. The report of this commission is rather an amusing document, and gives one some idea of the estimation in which the Stenographic art is held by some of our neighbours on the other side of the Channel. The report states that the Stenographic service costs a great deal, because Stenographers have maintained the prices which were conceded at the time when Stenography was almost regarded as a science, and when Stenographers were rather rare, whilst now, say they, this science is acquired in thirty lessons, and, besides all this, there are machines. The report goes on to say that application had been made to the inventor for the price of his machines, but that no reply had been vouchsafed—surely rather a strange circumstance. The commission had, however, calculated that even with the instrument it would be necessary to have four manipulators, as it would be impossible for them to work more than ten minutes at a time, requiring, besides, the readers and transcribers. The result was that they determined to remain as they had been, without either a Stenographic service or the Michela operators.

The Michela machine is used for reporting the speeches in the Italian Senate, but not in the Italian Chamber of Deputies, and it is not difficult to find the reasons for its rejection by the latter Chamber.

In the Senate the sittings are few and of short duration, while in the Chamber of Deputies they are more than twice as numerous and last much longer.

Statistics for the three years 1878, 1879, and 1880 show that the

Senate held 192 sittings, lasting altogether 449 hours and 45 minutes, during which a total of 1,771,863 words were spoken. This shows on analysis that the sittings only lasted on an average two and a third hours, while the speaking amounted to 3,937 words, or about 55 folios an hour.

The reporting in the Senate is said to be far from efficient, and the work is not much benefited by the supervision of the revisers, as in Italy the revision is not aided by Stenography. This entails the necessity for the speeches being sent to the orators, who are compelled to do the revision themselves. From this it can be seen that the transcriptions of the reporters' notes are far from being exact, and in this state of things the Michela machine came before the notice of the Senate, being said to reproduce more than 100 words a minute. The adoption of this machine entailed an augmentation in the number of *employés*, and modified the mode of reporting the speeches. The manner of following the speaker is as follows:—Whilst the pianists work the machine, the reporters in turn take a note of the speaker, placing themselves as near him as possible, the orators speaking from their places and not from the tribune. Having taken a three minutes' turn they revise the band of paper that has come from the machine in that time, and then make their transcription. Over and above this four Stenographers report the sitting by means of the old system, and these, by the aid of their notes, revise the report, filling up omissions and improving the style of the language. The report of the sitting, thus carefully reproduced, passes then through the hands of the revisers, who do not use Shorthand, and after some days is published. In this manner, as you may well suppose, good results are obtained, and the machine gets the merit of doing what is in reality accomplished by means of a better organisation.

In the Chamber of Deputies, again, they held, during the three years I have mentioned, 452 sittings of a total duration of 1,856 hours and 26 minutes, during which time 10,651,601 words were given forth. This shows that the Chamber sat on an average over four hours, while the speaking was at the rate of 5,739 words or 80 folios an hour.

In the Chamber, in the year 1878, they got young Stenographers to learn the Michela machine; but after five or six months the idea was abandoned in view of the wretched nature of the results. Later on the machine had another trial for the space of four months, but was again abandoned, and the reasons for this are very apparent. In the Chamber of Deputies the Stenographers are accustomed to greater efforts than in the Senate, and are therefore more efficient reporters. Thus the thirteen members who form the reporting corps there are quite capable of supplying full and correct reports of the speeches. It had been found, therefore, that the machine with its numerous following only complicated and retarded the work of reporting. The machine, with the most expert operators who had been specially trained to manipulate it, could reproduce sittings of short duration, as long as the speaker expressed himself in a clear and intelligible voice, and at a very moderate rate. This, however, any moderate reporter could do as well as the machine by the aid of his simple pencil and note-book. Then, again, the transcription of the speaker's words took up more time, as the syllables being dislocated and scattered upon a paper band could not be taken in at a glance; and a speech of three minutes would occupy at least a mètre and a-half in length. The machine, therefore, as shown by the practical working of it, was far from presenting those qualities which the writers in the Press taking too

sanguine a view had attributed to it. It was quite impossible to use it in reporting where the sittings were of even an ordinary length, where the interruptions were frequent, and where the speaker did not express himself clearly, but in an involved manner. Such is the report given of the working of the Michela machine in the Italian Parliament, and from what we can gather of its doings there, it does not seem that it would be at all suitable for the reporting work in our own Parliament, where the speaking is, as is well known, much quicker than on the Continent.

Indeed, methinks that the reporting work of the Italian Senate, which requires this great array of machine operators, check-note takers, and revisers, could be as well done by, say, four Shorthand-Writers, such as I could, without difficulty, point to at the present moment, the last of whose copy should be out in two hours after the House had risen. I think this little calculation does not say much for the reporting staff of the Italian Senate.*

Mr. Bartholomew, a professional Stenographer of Belleville, Illinois, has constructed a reporting machine which he calls "The Stenograph," and which he now uses in court reporting. He has adopted the plan of making only one letter at a time, and claims that as one is made by one hand, and the next by the other, he can attain a speed more than sufficient for the quickest speaking. The machine only weighs a few pounds, and has five keys, four of which have two buttons, or finger-pieces, each. By depressing the finger-piece on the extreme right of the keyboard, the extreme left finger-piece moves with it, and the same is the case with the three other finger-pieces. The writing is done on a paper ribbon through an inked ribbon which the keys strike against. Mr. Bartholomew writes Phonetically with the machine, marking all consonants, initials, and final vowels, and only omitting those which are not essential to legibility. Thirty-one combinations can be made with this machine. When a mistake occurs in writing, all the keys are struck once or twice together. The paper ribbon has, of course, to be read and transcribed in a similar manner to that of the Michela machine. To the most frequently-recurring letters Mr. Bartholomew has assigned the easiest combinations. The paper-reel holds about sufficient for one day's working. It seems possible that we may yet hear more of this machine, and that something on its principle may take a front rank among the reporting machines of the future.

Now in the several reporting machines I have endeavoured to describe you will find the same idea running through each. In the first place you must have the keys, more or less in number as the case may be. Then these keys all impinge upon a white paper ribbon which winds off a reel, either by a continuous motion or intermittently as the keys are struck. The impressions, again, are made through the medium of a moving inked ribbon, and in each case the position and combination of the letters or signs fixes their value. Thus you see that there is a great similarity in the machines, and I am afraid that they only complicate the labour of reporting. The Danish machine I think I may dismiss as not being practicable, and the Michela machine, I think I have shown, has fallen lamentably short of the expectations formed of it. As to the Bartholomew machine, it has not

* Since writing this Paper I have been favoured by M. Guénin, of Paris, with a copy of a "Notice sur une Presse Sténographique," in which the inventor, M. H. Gensoul, works out an almost similar idea to that of the Michela machine. Now as M. Gensoul's pamphlet is dated 1869, and Michela's English patent 1878, it would seem that the Italian had merely followed the line indicated by the Frenchman.

yet had a fair trial, and it would be therefore unfair to pass sentence upon it. Time would fail me were I to endeavour to describe the extraordinary machines which have been invented for the purpose of taking down the words of a speaker, and in the last month's number of the *Reporter's Magazine* is the description of an extraordinary invention which is said to be fastened on to the mouth, and which by a series of delicate levers transmits the vibrations to a strip of paper. It would be rather amusing, I think, to see a reporter at a public meeting with one of these muzzles on, and repeating into it the words of the speakers.

Turning from those appliances which I am not able to speak of from the standpoint of actual use and experience, I now come to firmer ground in dealing with that great aid to rapid and easy transcription, the Remington Type-Writer. This most useful machine, for which we are indebted, as we are for many good things, to our American cousins, is worked by vertical keys in four rows of eleven, the arrangement being not according to the letters of the alphabet, but somewhat like that of a compositor's case. These keys, which work like those of the piano, pull down little levers, each tipped with a letter, and striking all to one exact centre. The paper, which is placed on an indiarubber-faced cylinder, is carried by that cylinder automatically from right to left the exact distance of one letter each time a key is touched, the keys striking upwards against an inked ribbon which also moves automatically. As this cylinder approaches the end of the line a bell is rung, and as a few more letters can be written it enables the operator to finish the word he is writing or break off at the syllable. The cylinder is then brought back again by an ingenious contrivance and the next line written. At one side of the cylinder is a simple bit of mechanism which regulates the space between the lines. The bell also can be so arranged that it will warn at any place it is set, this being necessary in writing on narrow paper.

Any Shorthand writer who is at constant work knows how much easier it is for him to fill his book with notes as compared with the labour of transcribing them. After the exertion of taking notes for an hour or two, he sits down to the task of writing out, often devoutly wishing that it could be done as easily and expeditiously as the record was taken in his note-book. If, then, he can get a machine which not only does away with a considerable amount of the strain of writing, but which at the same time will actually perform the work of transcription with more expedition, I think it is well to inquire into its capabilities. Indeed, if only for the sake of supplying a change in the method of writing, it cannot fail to be of the utmost importance to those who have much transcription to do.

The mere fact that, in manipulating the type-writer, one can sit erect before it with the shoulders well squared is an important thing, saving that contraction of the chest which interferes so much with the free play of the lungs, and preventing the heavy or congested feeling at the back of the head so often experienced by those who have much writing to do.

Besides, those who write much with the pen are, amongst other evils, liable to what is called "writer's cramp," from the fact that the pen is held by the muscles of the ball of the thumb, and in some cases complete paralysis of these muscles ensues. That this is a thing occurring now and again is demonstrated by the prominence given to the subject in some of the American Shorthand papers. Indeed, attention has been drawn to the fact that one of their chief Stenographers was ambidextrous, and writing with both hands advised as a safeguard against this affliction.

Medical opinion shows that the type-writer is destined to be of practical service to those who are threatened with or suffer from writer's cramp, and to those who feel great nervous prostration from the fatigue of writing with the pen. Indeed, for such it is an almost perfect relief. Charles Reade is a great admirer of those who can use the left as well as the right hand, and in his *Coming Man* he says, "Writing should be done with either hand; Shorthand-writing ditto. I advise parents to have all their boys and girls taught Shorthand-writing and type-writing. * * A Shorthand-writer who can type-write his notes would be safer from poverty than a great Greek scholar."

Now, the type-writer, played, as it should be, like a piano, by using the three first fingers of each hand, does entirely away with the chance of contracting this distressing complaint. And here I would remark that many operators only use the two index-fingers in manipulating the machine, which is a great mistake, as they may only escape the Scylla of scrivener's cramp to fall into the Charybdis of telegrapher's palsy, which is contracted by always using the index finger to tap the key of the telegraph machine. As I have said, the manipulation of the type-writer should be equally divided among six fingers, and in course of practice they come to manipulate it as if it were part of one's self.

Mr. Brudenell Carter, in his book on *Eyesight—Good and Bad*, recommends the type-writer to all persons who, having "to write much, are made conscious by the exercise that they have eyes." "For the short-sighted," he adds, "it is especially valuable, because there can never be any inducement to stoop over it, so that a great snare to them in writing is altogether set aside." Amongst the many things which recommend the type-writer it is almost unnecessary to speak of the greater legibility and conciseness of the copy which it turns out. The lines run in the most beautiful regularity, averaging about twelve words, so that the folios are easily reckoned, and so legible is the writing that it is possible to revise it, I should say, twice as quickly as ordinary handwriting.

A good deal has been said as to the rate of speed at which the machine can be manipulated, and I do not always take for granted the figures given in connection with the achievements of this machine, any more than I do those of the phenomenal feats of note-taking with which we are favoured from time to time. When I bought a type-writer I said to myself I should be satisfied if, after I had practised it, it would do its work a little faster than ordinary writing with a greater amount of ease, and in this hope I have not been disappointed. The practice of a few months, and that at the busiest time of the year, enabled me to write considerably faster than I had been in the habit of doing, while, as I said before, it is a pleasant change from the mechanical drudgery of the pen, and saves the back, the chest, and the head. It is an acknowledged fact that few men can turn out more than twenty folios an hour with the pen, being at the average rate of twenty-four words a minute in an hour's writing, and that is considered a good hard rate of speed in writing many hours at a time. It has been said that the maximum speed with the pen is from thirty to forty words per minute, but very few writers could keep up that rate of speed for many minutes at a time, and the copy in most cases would be far from being legible. On the other hand, it is claimed for the type-writer that it can be worked by practice up to a speed of from sixty to eighty words, and there are well-authenticated cases of even greater speed being attained. I do not pretend myself to have yet accomplished anything like this vast amount,

but I find that by the aid of the type-writer I can at present about double my speed, after the comparatively short time I have devoted to the practice of the machine. Indeed, I find that every day it becomes more and more a part of myself, so that I look forward to attaining a far greater average speed than I have yet been able to command.

Like everything else in this world, there is a right and a wrong way of manipulating this machine. The keyboard is composed of forty-four keys, arranged in four rows, and these should be almost equally divided between the fingers of both hands, the right hand manipulating the right half of the keyboard, while the left hand works the corresponding half. By using the three first fingers of each hand, as I have said, a good style of playing the machine can be acquired; and in order to gain facility in its working those words which are most in use in the language, amounting to a few hundreds, and which can be taken out of any Shorthand instruction-book, should be practised over and over again until ease and facility in writing them is acquired. The long bar, which makes the spaces between the words, is always struck by the third finger of the right hand, and in course of practice this action becomes quite automatic.

The perfected type-writer, as supplied by Messrs. Remington, has a metal cover, and is portable. It is a beautiful piece of mechanism, is almost noiseless, and seems to be as near perfection as it is possible to go with this principle. It is supplied with Roman and Gothic type, and also with upper and lower case for those who like capitals at the beginning of a sentence. I myself prefer the Roman or all capitals machine, as there is no necessity for changing from small to big type, which of course tends to slacken the speed of writing. Now I believe that many people have been bothered by not having a good holder for their note-book or copy, but the excellent holder now supplied by Messrs. Beeman and Roberts seems to me exactly suited to the purpose. It can be set at any height or angle, the paper or book is held tightly by the top and bottom clips, while the guide at the side can be moved down line by line as the transcription proceeds.

Before leaving the type-writer I should mention that in two several cases the attempt has been made to adapt the machine to swift writing. Mr. E. T. Underhill, a well-known Stenographer of New York, has worked out a very ingenious system of Steno-printing by which he claims to increase the speed of the machine to from 120 to 150 words a minute. I have carefully gone into this system of Mr. Underhill's, and cannot help congratulating him on the skill he has displayed in adapting the machine to very rapid writing. I can only here, of course, give a mere outline of his system, which is founded on Stenographic principles, and which could only have been worked out by a practical Stenographer. The exercises commence with simple abbreviations, such as ab- for about, bcm for become, f- for for, fm for from, and so on. Then prefixes and suffixes are treated in the following manner:—for and fore are represented by the letter "f," as fgv- forgive; fgo- forego; like by lk- as lk wz- likewise; mnlk- manlike, &c. Circum is represented by cc- as ccflx- circumflex. As suffixes, we find aught represented by ot- as frot- fraught; noty-naughty. Cl stands for clude, as xcl- exclude. Then again arbitrary representations are made by employing the figures 2, 3, 4, 5, 6, 7, 8, and 9, and the punctuation marks, the comma, semicolon, hyphen, and exclamation point. To each figure is assigned the representation of both a prefix and suffix; for instance, con and com are represented by the figure 4; as 4ps- com-

pose; 4fn confine; while 4 as a suffix stands for rt-; for example, rt 4- retort. Then again 6 as a prefix stands for pre; for example, 6fr- prefer; 6vl prevail; and 6 as a suffix represents ble; hnr6- honourable; ps6- possible. The prefixes and suffixes are combined to represent the appropriate adjuncts and syllables occurring in conjunction—for instance, accom is represented by the letter “a” joined to the figure 4- com-; as a4dt- accommodate; discom by ds added to 4; as ds4ps- discompose; while in some instances the larger portion even of whole words is represented by combined prefixes and suffixes; as 54f46- uncomfortable.

Mr. Deming, an American Stenographer, has used the type-writer in Court for reporting the proceedings, and has adapted to it an ingenious system of Stenotypic reporting. His machine is provided with a glass case, which renders the mechanism practically noiseless in working. It is evident that were one to use even such a system of steno-printing as I have just been explaining, they would fall far short of the requirements of Court reporting. An average of two letters to each word would require to be struck, and a third touch would have to be made for the space between the words. By omitting the space a third of the average time is saved, and the rate approaches that of a good system of Shorthand. At the same time a continuous line of letters only would be very difficult to divide into words, and therefore the spacing bar of the type-writer has been connected with a dotter. By the mere turn of a button, and while the initial letter of a word is being struck by one of the fingers, the dot is made over that letter by the thumb simultaneously striking the space bar. The emphasis of the initial letter thus soon becomes a habit, and is done quite mechanically.

For instance, suppose we write “This is a new way to do it.” It is turned out by the type-writer in the following fashion:—

THSSÄNWWYTDÏ.

Mr. Deming states that he has used the type-writer in Court for a week at a time, but he prefers to use it hour and hour alternately with the pen or pencil. He affirms that he thus experiences considerable relief from the exhaustion caused by a long spell of writing Phonography.

Of late years another writing machine has been before the American public—viz., the caligraph. This machine is as nearly as possible a copy of the Remington type-writer, but is much lighter. The makers of it claim some advantages over the parent instrument, but I have not been able to judge from a personal inspection whether that is so or not. It is a somewhat strange thing that not one of these machines is for sale in this country, and though the maker of them informed me in the autumn of last year that he was about to place them on the English market, this has not as yet been done. I have, however, carefully considered their prospectus, and have weighed its advantages and disadvantages. My own opinion would be that although a very light machine may be useful for carrying about, yet my practice leads me to the conclusion that for steady office work the machine is all the better for being substantial, and that were I to insure the life of a type-writer I would prefer to back one of the earlier machines made by the Remington Co. against the portable machines now made by that firm, or the caligraph.

In concluding this Paper I trust I may claim that I have opened up for discussion this evening a subject which has been but little known in

this country, but which I feel before long will engross more attention than it has in the past. I am not one of those who look with any apprehension to the advent of mechanical assistance to us Stenographers in our arduous and exhausting duties. Far from that I should hail with the utmost satisfaction any invention which would aid us either in the reporting or transcribing part of our work. Wherever mechanical aid has stepped in, it has invariably increased the demand for the article produced; and should reporting machines in the future become generally used, the demand for Shorthand work would become greater. As you will have gleaned from my Paper I thoroughly believe in the type-writer as a pleasant change from the drudgery of the pen, and at the same time producing "copy" more expeditiously and legibly. On the other hand, I do not think that a good reporting machine has yet been invented. As I have shown, the results of the Michela machine, for which so much has been claimed, are meagre in the extreme. But I believe that in the future we may have one or more efficient reporting machines which, as the type-writer proves a pleasant and salutary change to ordinary writing, may in a similar manner relieve the labour of note-taking. When that time comes it will be found that, far from interfering with the work of the trained and thoughtful reporter, they will only be like the pen or pencil, efficient tools in his hands; and that in reporting, as in everything else in the way of mental effort, it will be found that "the man's the man for a' that."

[In the course of the evening, Madame Monchablon, type-writing expert, gave several examples of rapid writing, averaging sixty words per minute, on one of Remington's latest machines, kindly lent by Messrs. Beeman and Roberts, of King-street, Cheapside. An interesting discussion followed, in which the President and Messrs. Pearsall, Guest, Anderson, Pocknell, Storr, Rundell, Wyman, and Sparkhall took part.]

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By JAMES G. PETRIE.

PRESS NOTICES.

Athenæum.—“Shorthand Society, May 2nd.—Mr. J. G. PETRIE read a paper ‘On Reporting and Transcribing Machines.’ The Danish, Bartholomew, and Michela machines and their capabilities were minutely explained. The last-named machine is in use in the Italian Senate; but Mr. PETRIE showed, by a careful analysis of the results, that what was attributed to it was mainly due to its work being checked by a large staff of reporters and revisers, while the reports, before appearing in print, are eventually corrected by the speakers themselves. Though he would hail with satisfaction any mechanism which would assist the shorthand-writer in his arduous duties of note-taking, he did not believe that any of the existing machines could do better work than could be done with the old note-book and pen or pencil; at the same time he advocated, from actual experience, the use of the type-writer for the transcription of notes, as it not only got out the ‘copy’ more expeditiously and legibly, but also afforded a salutary change from the drudgery of the pen. The paper was illustrated by machines and drawings, and expert writing, averaging sixty words a minute, was shown with the type-writer.”

Printing Times and Lithographer, 15th May, 1882.—“An animated discussion followed Mr. PETRIE’S excellent and practical paper, which was especially interesting from the printer’s point of view.”

Favourable notices also appeared in *City Press*, *Citizen*, *English Mechanic*, *Antiquarian Magazine*, &c., &c.

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On and after 1st Oct., 1882, Mr. Petrie's address will be

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